

CLAIMS

1. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded on a recording medium;

data error correction means of performing error correction processing on the data reproduced from said recording medium based on a predetermined algorithm; and

seek length detection means of monitoring a seek length when the data is reproduced from said recording medium;

wherein said data error correction means modifies said predetermined algorithm according to said seek length.

2. The data reproduction apparatus according to Claim 1, wherein:

said seek length detection means comprises a rewritable register and modifies the error correction algorithm by comparing a predetermined set value set in said register with said seek length.

3. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded on a recording medium;

clock count means of counting clocks based on data reproduced from said recording medium;

window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position;

synchronization signal detection means of detecting the synchronization signal from the data reproduced from said recording medium by searching within said synchronization detection window; and

seek length detection means of monitoring a seek length when the data is reproduced from said recording medium;

wherein said window generation means changes the width of said synchronization detection window signal for a predetermined period of time according to said monitored seek length.

4. The data reproduction apparatus according to Claim 3, wherein said synchronization signal detection means changes criteria for detecting said synchronization signal according to said monitored seek length.

5. The data reproduction apparatus according to Claim 3, wherein said seek length detection means comprises

a rewritable register and said window generation means changes the width of said synchronization detection window signal by comparing a predetermined set value set in said register with said seek length.

6. The data reproduction apparatus according to Claim 3, wherein said predetermined period of time during which the width of said synchronization detection window signal is changed is a time period from the completion of said seek operation to the time when said synchronization signal is detected with stability.

7. The data reproduction apparatus according to Claim 3, wherein said predetermined period of time during which the width of said synchronization detection window signal is changed is associated with said seek length.

8. The data reproduction apparatus according to Claim 3, wherein the quantity of change in the width of said synchronization detection window signal is associated with said seek length.

9. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded on a recording medium;

data error correction means of performing error correction processing on the data reproduced from said recording medium based on a predetermined algorithm; and

defect detection means of detecting a defect on said recording medium;

wherein said data error correction means modifies said predetermined algorithm for a period of time during which said defect is detected.

10. The data reproduction apparatus according to Claim 9, wherein said defect detection means determines the type and/or size of said defect and said error correction means modifies said predetermined algorithm to be modified according to said determined type and/or size of said defect.

11. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded in the recording medium;

clock count means of counting clocks based on the data reproduced from said recording medium;

window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position;

synchronization signal detection means of detecting the synchronization signal from the data reproduced from

said recording medium by searching within said synchronization detection window; and

defect detection means of detecting a defect on said recording medium based on the data reproduced from said recording medium;

wherein said window generation means changes the width of said synchronization detection window signal at least for a period of time during which said defect is detected.

12. The data reproduction apparatus according to Claim 11, wherein said defect detection means determines the type and/or size of said defect and said window generation means changes the quantity of a change in the width of said synchronization detection window signal according to said determined type and/or size of said defect.

13. The data reproduction apparatus according to Claim 11, wherein said window generation means detects said defect, and if the width of said window signal is changed, continues to change the width of said synchronization detection window signal for a predetermined period of time after the detection of said defect ends.

14. The data reproduction apparatus according to Claim 13, wherein said predetermined period of time is a time period from the completion of the detection of said defect

to the time when said synchronization signal is detected with stability.

15. The data reproduction apparatus according to Claim 11, wherein said synchronization signal detection means changes said criteria for detecting said synchronization signal according to the detection of said defect.

16. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded on a recording medium on which a land track and a groove track are formed alternatively in a spiral or concentric fashion;

error correction means of performing error correction processing on the data reproduced from said recording medium based on a predetermined algorithm; and

track determination means of determining at least whether said reproduced data is reproduced from said land track or said groove track;

wherein said data correction means modifies said predetermined algorithm according to the determination by said track determination means.

17. A data reproduction apparatus comprising:

reproduction means of reproducing data recorded on a recording medium on which a land track and a groove

track are formed alternatively in a spiral or concentric fashion;

clock count means of counting clocks based on data reproduced from said recording medium;

window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position;

synchronization signal detection means of detecting the synchronization signal from the data reproduced from said recording medium by searching within said synchronization detection window; and

track determination means of determining at least whether said reproduced data is reproduced from said land track or said groove track;

wherein said window generation means changes the width of the synchronization detection window signal according to the determination of said track determination means.

18. The data reproduction apparatus according to Claim 17, wherein said synchronization signal detection means changes said criteria for detecting said synchronization

signal according to the determination of said track determination means.

19. The data reproduction means according to Claim 3, 11, or 17, wherein said window generation means comprises a rewritable register and changes the width of said synchronization detection window signal by a width set in said register.

20. The data reproduction apparatus according to Claim 1 or 3, wherein said seek length detection means uses an address detected in said storage medium to detect said seek length.

21. The data reproduction apparatus according to Claim 9 or 11, wherein said defect detection means analyzes the envelope of an RF signal read from said storage medium to detect said defect.

22. The data reproduction apparatus according to Claim 16 or 17, wherein said track determination means uses the address detected from said storage medium to perform said determination.

23. A program for causing a computer to function as all or any of the reproduction means of reproducing data recorded on a recording medium, the data error correction means of performing error correction processing on the data reproduced from said recording medium based on a



predetermined algorithm, and seek length detection means of monitoring a seek length when the data is reproduced from said recording medium of the data reproduction apparatus according to Claim 1.

24. A program for causing a computer to function as all or any of the reproduction means of reproducing data recorded on a recording medium, the clock count means of counting clocks based on data reproduced from said recording medium, window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position, the synchronization signal detection means of detecting the synchronization signal from the data reproduced from said recording medium by searching within said synchronization detection window; and the seek length detection means of monitoring a seek length when the data is reproduced from said recording medium of the data reproduction apparatus according to Claim 3.

25. A program for causing a computer to function as all or any of the reproduction means of reproducing data recorded on a recording medium, the data error correction means of performing error correction processing on the

data reproduced from said recording medium based on a predetermined algorithm, and the defect detection means of detecting a defect on said recording medium of the data reproduction apparatus according to Claim 9.

26. A program for causing a computer to function as all or any of the clock count means of counting clocks based on the data reproduced from said recording medium, window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position, the synchronization signal detection means of detecting the synchronization signal from the data reproduced from said recording medium by searching within said synchronization detection window, the defect detection means of detecting a defect on said recording medium based on the data reproduced from said recording medium of the data reproduction apparatus according to Claim 11.

27. A program for causing a computer to function as all or any of the reproduction means of reproducing data recorded on a recording medium on which a land track and a groove track are formed alternatively in a spiral or concentric fashion, the error correction means of

performing error correction processing on the data reproduced from said recording medium based on a predetermined algorithm, and the track determination means of determining at least whether said reproduced data is reproduced from said land track or said groove track of the data reproduction apparatus according to Claim 16.

28. A program for causing a computer to function as all or any of the reproduction means of reproducing data recorded on a recording medium on which a land track and a groove track are formed alternatively in a spiral or concentric fashion, the clock count means of counting clocks based on data reproduced from said recording medium, the window generation means of estimating the position of a synchronization signal in said reproduced data based on the count value of said clocks and generating a synchronization detection window signal having a predetermined width including the estimated position, the synchronization signal detection means of detecting the synchronization signal from the data reproduced from said recording medium by searching within said synchronization detection window, and the track determination means of determining at least whether said reproduced data is reproduced from said land track or

said groove track of the data reproduction apparatus according to Claim 17.